



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/544,897

02/02/2006

Ralf Dunkel

CS-8582/LeA 36,354

6478

34469

7590

10/15/2007

BAYER CROPSCIENCE LP

Patent Department

2 T.W. ALEXANDER DRIVE

RESEARCH TRIANGLE PARK, NC 27709

EXAMINER

HAVLIN, ROBERT H

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

10/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/544,897	<b>Applicant(s)</b> DUNKEL ET AL.	
	<b>Examiner</b> Robert Havlin	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 19-22, 27-29, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) 27 and 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-22, 28 and 33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

**Status of the claims:** Claims 1-18, 23-26, 30-31, and 34-35 were cancelled; claims 19, 27 were amended; and claims 27 and 29 were withdrawn. Claims 19-22, 27-29, 32, and 33 are currently pending.

**Priority:** This application is a 371 of PCT/EP04/01053, filed on February 5, 2004 and claims benefit under 35 U.S.C. 119(a)-(d) to foreign applications Germany 10306244.0, filed February 14, 2003 and Germany 10321270.1, filed May 13, 2003.

**Restriction:** As detailed in the prior office action, unity of invention is lacking therefore restriction is proper. Although the applicant partly traverses the restriction requirement, no arguments are presented as to why it was improper; therefore the requirement is hereby made final.

### ***Rejections in Prior Office Action***

The 103(a) rejections based on the Japanese patent documents are hereby withdrawn. The applicant has amended around the cited prior art. However, the prior cited reference of Hahn et al. continues to render the claims unpatentable as detailed below.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

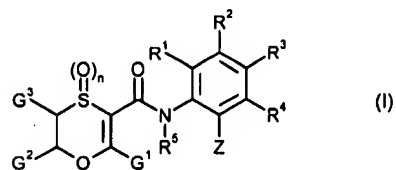
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 19-22, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahn et al. (Han'guk Nonghwa Hakhoechi (2001), 44(3), p. 191-196).

Art Unit: 1626

The instant claims read on a compound of formula (I):



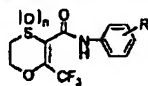
where G1 is trifluoromethyl; G2, G3, and R1-5 are hydrogen; n=0; and Z is 2-CH<sub>2</sub>CH<sub>3</sub>.

Hahn et al. teaches the identical compound in Table 1, where R=2-CH<sub>2</sub>CH<sub>3</sub>; n=0

(compound 52).

Art Unit: 1626

Table 1. The melting points, yields and disease control effects of trifluoromethylated dihydro-1,4-oxathin carboxanilides prepared



n = 0: 5  
n = 1: 14  
n = 2: 16

(250 ppm. *in vivo*)

entry	n	R	m.p. (°C)	yields <sup>a</sup> (%)	Control value (%)					
					RCB	RSB	CGM	TLB	WLR	BPM
1	0	H	109	83	0	20	0	21	0	7
2	1	H	187-190	88	7	10	13	0	0	7
3	2	H	220	70	"	"	"	"	"	"
4	0	4-CH <sub>3</sub>	169	59	7	50	8	7	86	15
5	0	2-OCH <sub>3</sub>	117	85	0	82	22	21	96	0
6	0	3-OCH <sub>3</sub>	136	41	8	93	35	15	100	25
7	0	4-OCH <sub>3</sub>	139	56	42	70	18	21	92	0
8	0	2-Cl	155	88	14	70	2	21	98	23
9	0	3-Cl	143	75	94	93	35	15	100	0
10	0	4-Cl	152-153	46	41	25	22	36	98	0
11	0	2-F	140-141	62	97	24	29	30	100	0
12	0	3-F	122-123	85	87	97	61	47	100	14
13	0	4-F	135	53	33	58	9	13	100	0
14	0	3-NO <sub>2</sub>	144	36	0	11	0	13	60	0
15	0	4-NO <sub>2</sub>	149-151	63	0	5	0	0	0	0
16	0	4-Br	162-163	53	25	29	3	0	80	0

Table 1. Continued.

entry	n	R	m.p. (°C)	yields <sup>a</sup> (%)	Control value (%)					
					RCB	RSB	CGM	TLB	WLR	BPM
17	0	2-CF <sub>3</sub>	193	78	0	0	0	13	0	14
18	0	2-C <sub>2</sub> H <sub>5</sub>	123	36	0	5	35	13	0	35
19	0	4-C <sub>2</sub> H <sub>5</sub>	225	23	0	0	0	4	0	0
20	0	2-CN	194	45	0	0	22	0	0	0
21	0	3-OCH(CH <sub>3</sub> ) <sub>2</sub>	142	53	8	93	29	26	100	0
22	0	4-OCH(CH <sub>3</sub> ) <sub>2</sub>	138-139	37	8	12	3	0	0	0
23	0	3-SCH <sub>3</sub>	75-76	73	90	94	48	47	100	0
24	0	4-CH <sub>2</sub> CH <sub>3</sub>	163	51	8	43	29	0	99	16
25	0	3-OOC <sub>2</sub> H <sub>5</sub>	129-130	80	0	5	3	4	0	0
26	0	3-CO <sub>2</sub> CH(CH <sub>3</sub> ) <sub>2</sub> , 4-Cl	126-127	90	0	0	48	0	0	14
27	0	2,5-di CH <sub>3</sub>	160-163	29	0	50	48	0	93	0
28	0	2,4-di CH <sub>3</sub>	157-158	25	"	"	"	"	"	"
29	0	2,5-di Cl	146-147	54	0	18	35	36	0	41
30	0	3-Cl, 6-CH <sub>3</sub>	178-179	19	0	6	35	0	0	41
31	0	2-Cl, 4-CH <sub>3</sub>	136	80	0	12	0	15	86	25
32	0	2,6-di Et	190	42	0	17	48	0	0	0
33	0	2,4-di F	140-141	59	16	93	29	0	100	25
34	0	2,4,6-tri CH <sub>3</sub>	210	32	0	12	9	15	0	33
35	0	2,4,6-tri Cl	215	32	0	43	41	26	0	8
36	0	2,4-di Cl	161-163	50	0	37	35	5	16	50
37	0	2,6-di Cl	191	55	"	"	"	"	"	"
38	0	2-CH <sub>3</sub>	117	80	0	93	61	15	100	16
39	0	3-CH <sub>3</sub>	106	80	93	94	70	47	100	42
40	0	3-CH(CH <sub>3</sub> ) <sub>2</sub>	107	90	99	100	52	14	100	20
41	0	4-CH(CH <sub>3</sub> ) <sub>2</sub>	148	51	30	50	12	28	83	10
42	0	2-OC <sub>2</sub> H <sub>5</sub>	126	92	78	55	20	14	88	10
43	0	3-CN	210	53	30	25	20	14	53	10
44	0	4-OC <sub>2</sub> H <sub>5</sub>	153-154	60	30	50	36	14	60	0
45	0	4-Cl, 5-CF <sub>3</sub>	140	72	96	50	4	21	0	10
46	0	3-CF <sub>3</sub>	153-154	88	97	92	28	50	98	10
47	0	2-Cl, 6-OC <sub>2</sub> H <sub>5</sub>	169-170	75	30	30	0	21	0	10
48	0	4-COCH <sub>3</sub>	187-188	38	55	45	0	14	66	10
49	0	2-Cl, 6-CH <sub>3</sub>	184	26	0	65	36	14	73	20
50	0	3-Cl, 4-CH <sub>3</sub>	138	78	20	40	20	42	0	10
51	0	2-Cl, 5-CF <sub>3</sub>	113	87	40	92	20	28	0	30
52	0	2-CH <sub>2</sub> CH <sub>3</sub>	176	82	60	92	28	0	96	0
53	0	2-CH(CH <sub>3</sub> ) <sub>2</sub>	176	87	"	"	"	"	"	"
54	2	2-Cl	185	82	70	25	54	78	80	0
55	2	2-NO <sub>2</sub>	225	71	"	"	"	"	"	"
56	2	2-OCH <sub>3</sub>	178	85	37	0	35	73	0	0
57	2	2,4-di F	196-197	70	79	0	54	78	70	0
58	2	3-Cl	152-153	51	"	"	"	"	"	"

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19-22, 28, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al.

The claims are drawn to a compound identified as above with a C2-C5 methoxy group at the 2 position.

*Teaching of the prior art:*

Hahn teaches 2-OCH<sub>3</sub>, and related groups such as 2-C<sub>6</sub>H<sub>5</sub> and 3-OCH(CH<sub>3</sub>)<sub>2</sub> as set forth in table 1 above.

*Differences between the prior art and the claims:*

The claims and the prior art differ by a single methylene group.

*Finding of prima facie obviousness:*

One of ordinary skill in the art would recognize that similar substitutions on a phenyl ring would yield similarly active compounds just as was taught by Hahn et al. with the variable "R" group of table 1. Since Hahn also teaches groups such as 2-C<sub>6</sub>H<sub>5</sub> and 3-OCH(CH<sub>3</sub>)<sub>2</sub> it would have been obvious to one of skill in the art to make substitutions such as 2-OCH<sub>2</sub>CH<sub>3</sub> given the teachings of related substitutions on the same ring. Therefore, it would have been obvious to one of ordinary skill in the art to make a substitution of 2-ethoxy on the phenyl ring.

***Conclusion***

The claims are not in condition for allowance. Any new basis for rejections in this office action were necessitated by the applicant's amendments, therefore **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Correspondence***

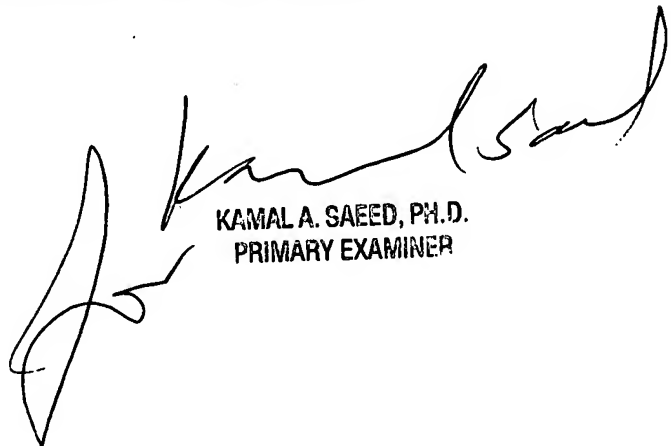
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Havlin whose telephone number is (571) 272-9066. The examiner can normally be reached on Mon. - Fri., 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor, Joe McKane can be reached at (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert Havlin  
Examiner

RH



KAMAL A. SAEED, PH.D.  
PRIMARY EXAMINER